

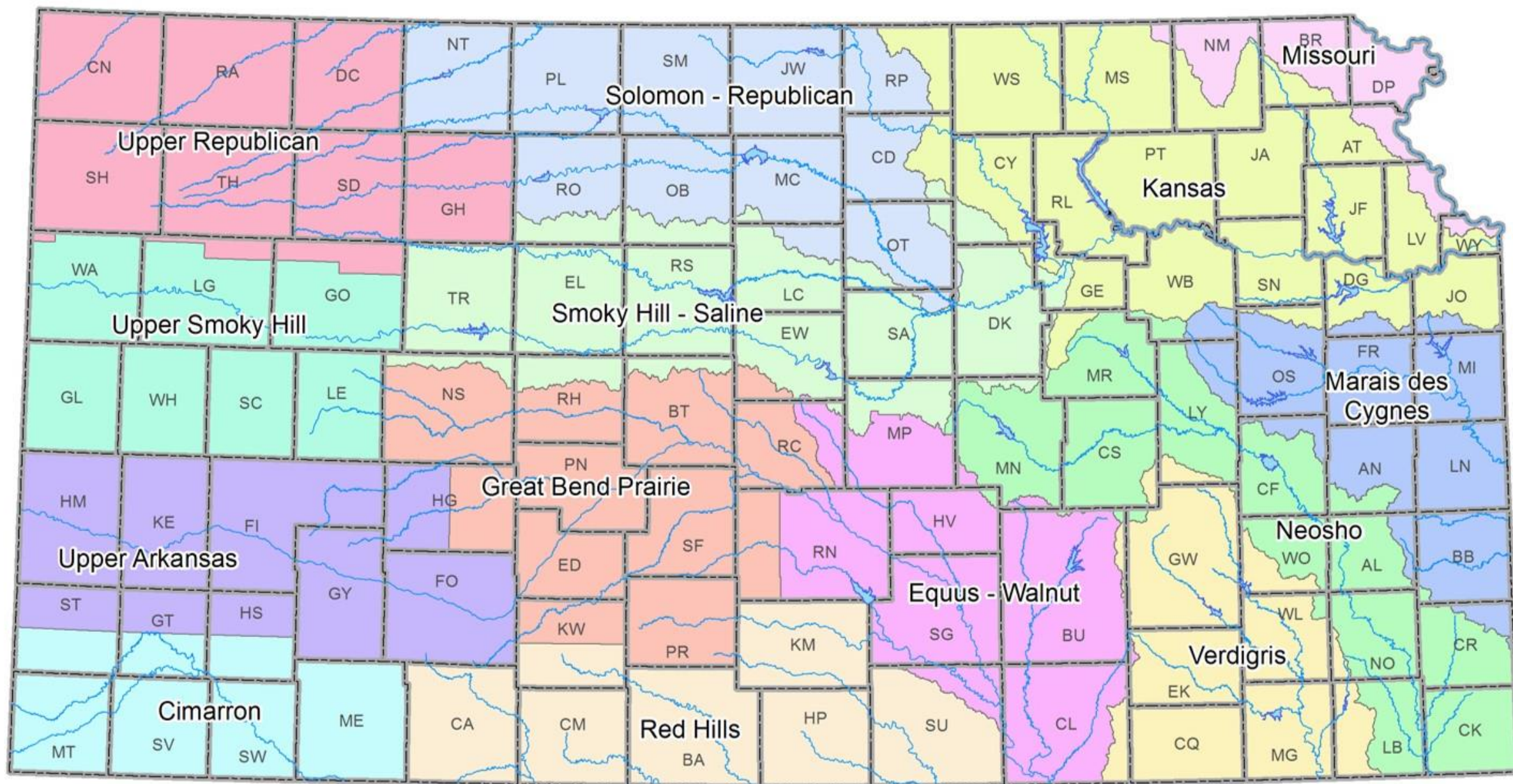
KANSAS WATER VISION IMPLEMENTATION – A REGIONAL APPROACH

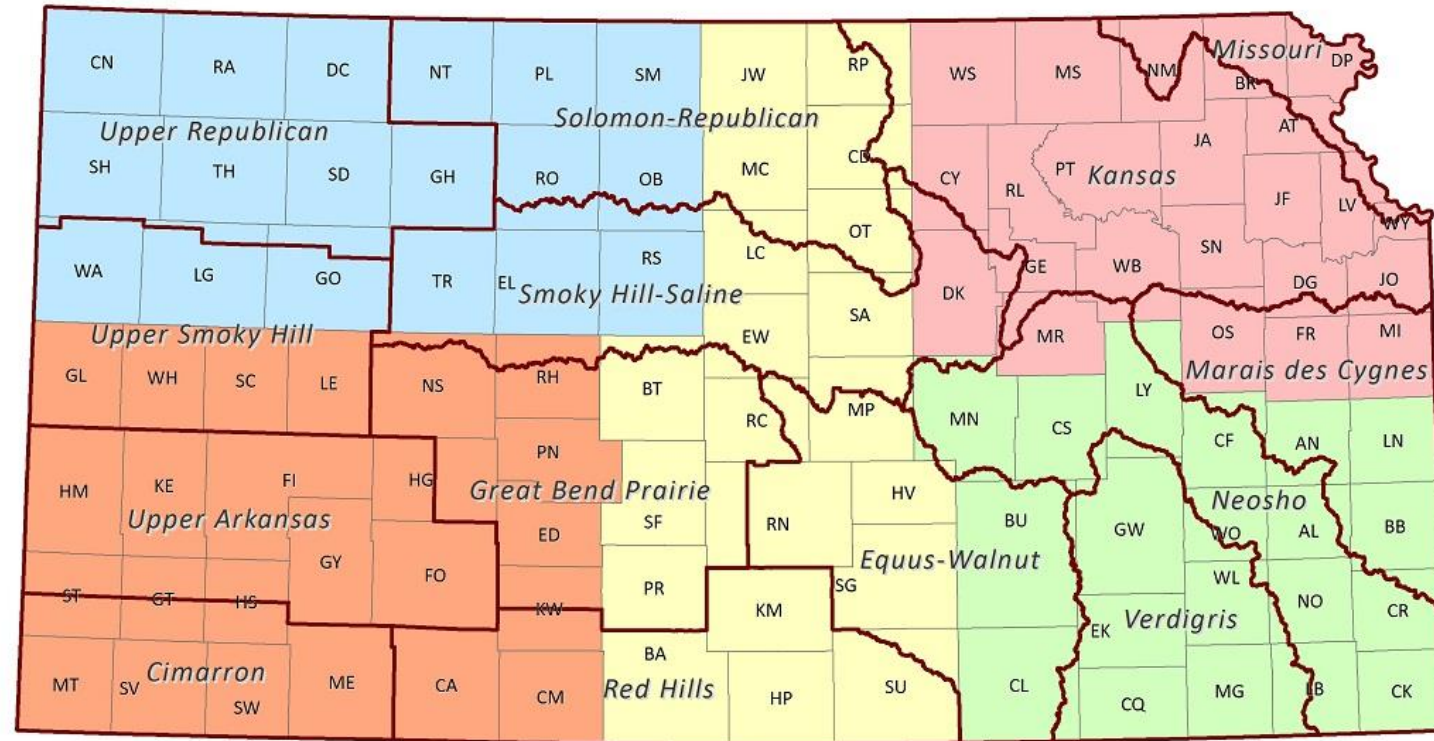


State Conservation Commission Spring Workshops

March 7, 2017

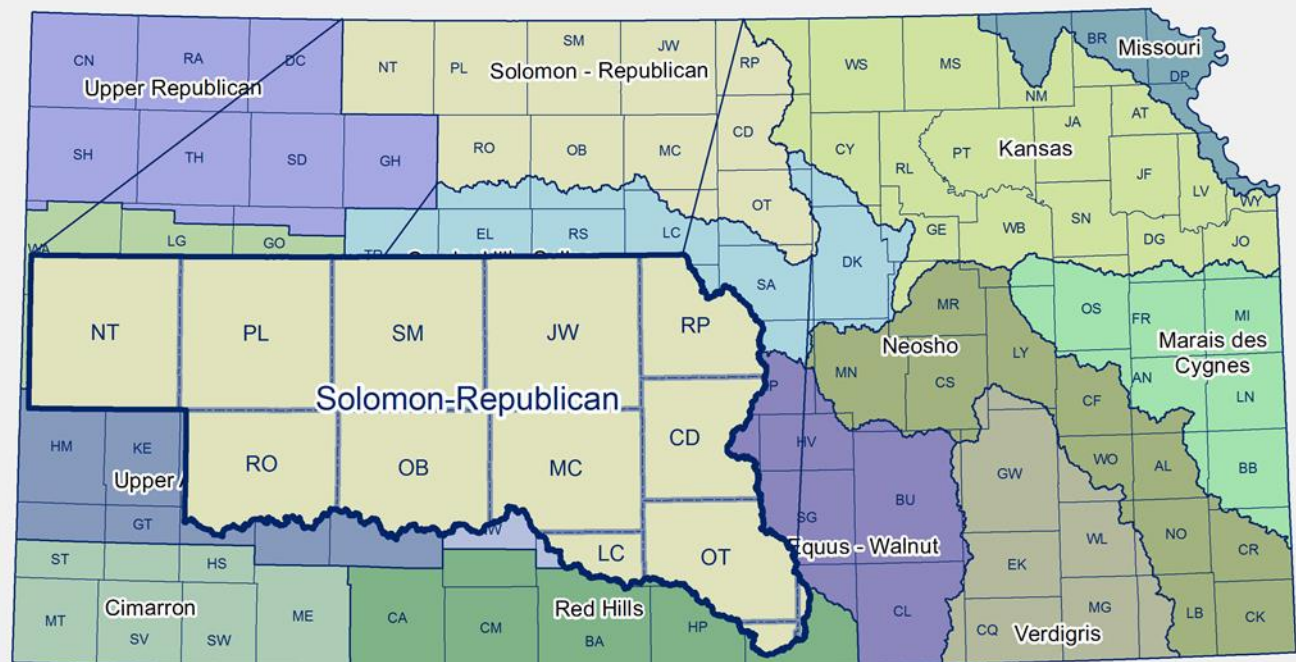
REGIONAL ADVISORY COMMITTEES



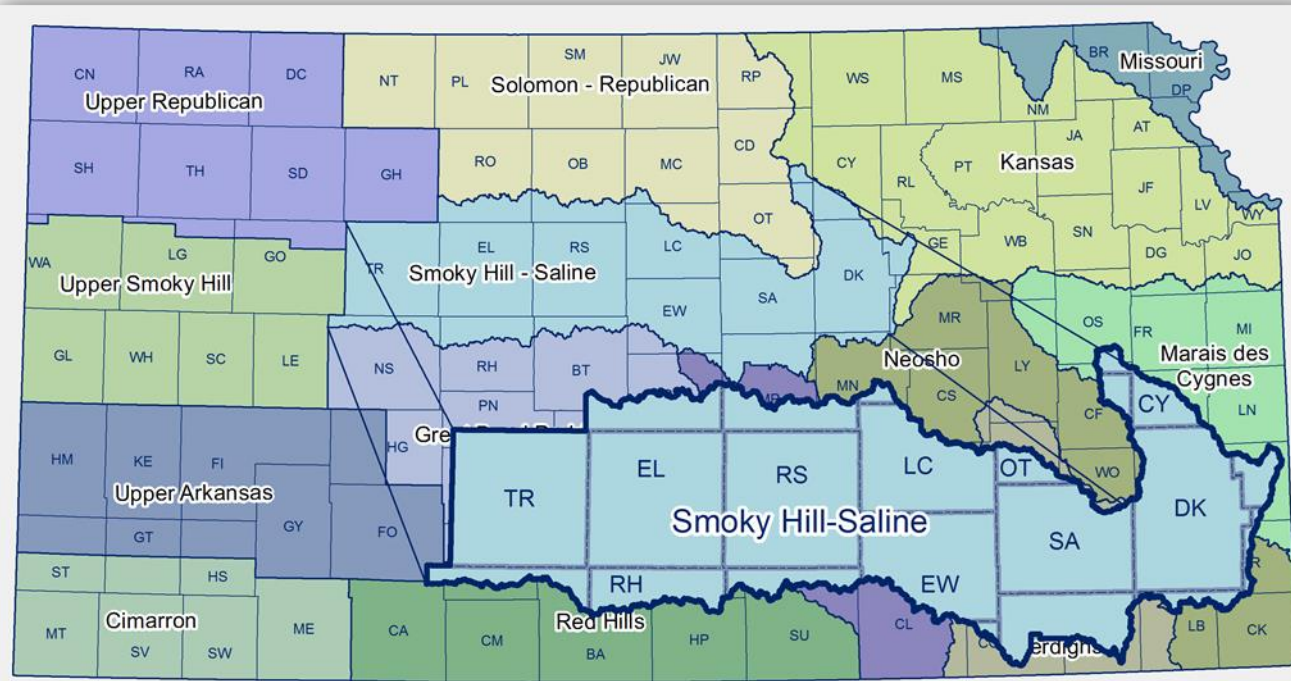


Kansas Conservation District Areas

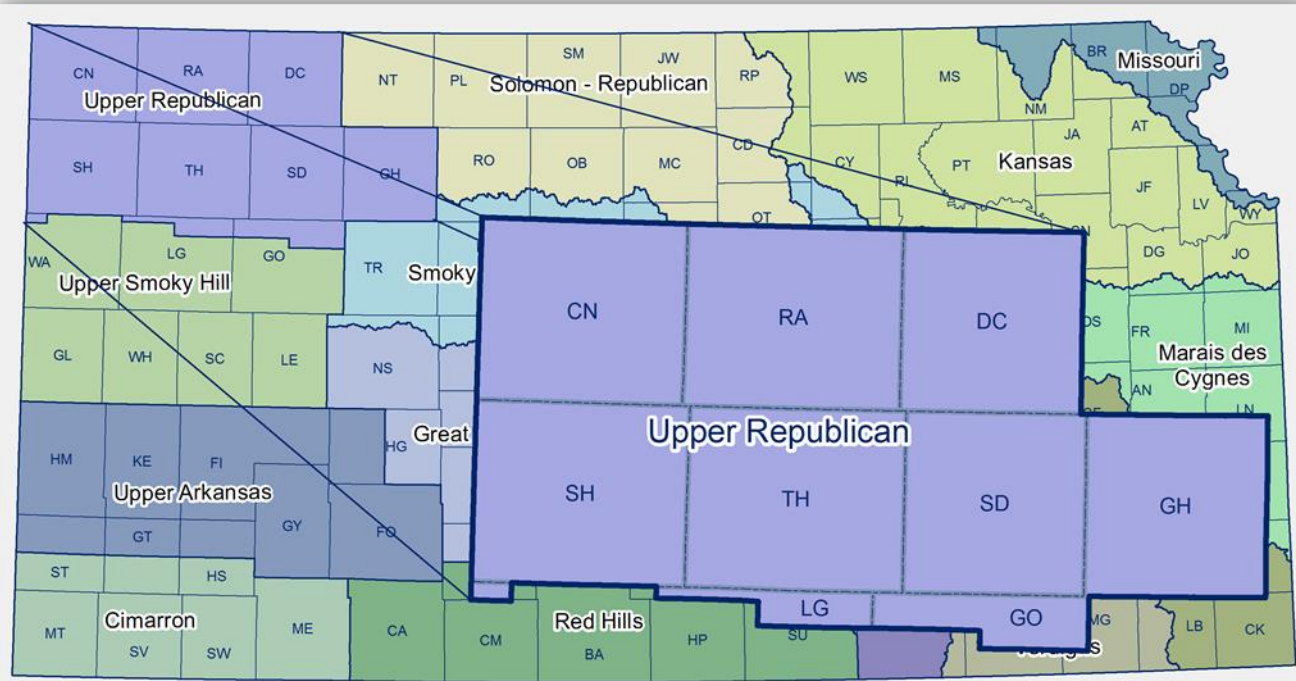




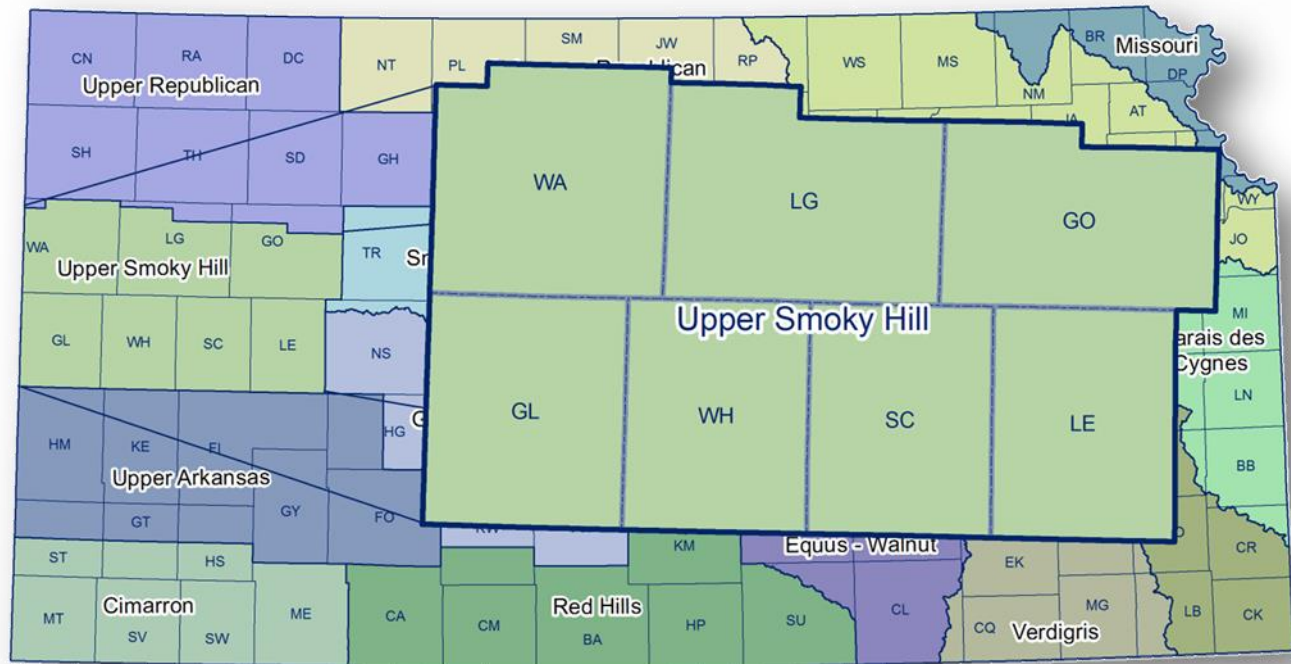
Membership			
Name	City	Category	Term
Donald Hellwig (Chair)	Solomon, KS	Agriculture 2	2017
Mike Brzon	Courtland, KS	At Large Public 2	2017
John Cockerham	Osborne, KS	Conservation/Environment (cc)	2017
Raymond DeBey	Cawker City, KS	Agriculture (cc)	2019
Timothy Driggs	Phillipsburg, KS	Public Water Supply (cc)	2019
Stacey Forshee	Delphos, KS	At Large Public 3	2019
Keith Houghton	Tipton, KS	Fish, Wildlife & Recreation	2019
James (JP) Metzler	Minneapolis, KS	Industry & Commerce (cc)	2019
Terry Nelson	Long Island, KS	Irrigation West	2017
David Pfizenmaier	Clay Center, KS	At Large Public 4	2017
Arnold Ross	Webber, KS	Irrigation East	2019
Scott Ross	Stockton, KS	At Large Public (cc)	2017



Membership			
Name	City	Category	Term
Martha Tasker (Chair)	Salina, KS	Public Water Supply (cc)	2019
Greg Barrett	Marquette, KS	Agriculture 2	2017
Sandra Beisner	Ellis, KS	Industry/Commerce (cc)	2019
Toby Dougherty	Hays, KS	Large Public Water Supply	2019
Paul Froelich	Enterprise, KS	At Large Public 2	2017
Chris Meyer	Sylvan Grove, KS	Agriculture (cc)	2019
John Peckham	Salina, KS	Conservation/Environment 2	2019
Allen Roth	Hays, KS	Conservation/Environment (cc)	2017
Bevin Law	Longford, KS	Conservation	2017
Timothy Scheck	Russell, KS	Industry/Commerce 2	2017
Alan Scheuerman	Ellis, KS	Small Public Water Supply	2019
Brad Shogren	Lindsborg, KS	Irrigation	2017



Membership			
Name	City	Category	Term
Sid Metcalf (Chair)	Oberlin, KS	At Large Public (cc)	2019
Brian Baalman	Menlo, KS	Industry/Commerce (cc)	2017
Shannon Kenyon	Colby, KS	Groundwater Management	2019
Gary Fisher	Atwood, KS	Local Government	2017
Mike Frakes	Morland, KS	At Large Public 2	2017
Jered Johnson	Colby, KS	Conservation/Environment (cc)	2017
Ken McCarty	Rexford, KS	Agriculture Industry	2019
Mike Shultz	Brewster, KS	Public Water Supply (cc)	2019
Justin Sloan	Colby, KS	Agriculture 2	2017
Tyson McGreer	Colby, KS	Public Water Supply 2	2017
Adriaan (Ian) De Waal	St. Francis, KS	Agriculture (cc)	2019



Membership			
Name	City	Category	Term
Shane Mann (Chair)	Quinter, KS	Irrigation	2019
Lonnie Busch	Leoti, KS	Industry/Commerce (cc)	2017
Kurt Maurath	Logan Co., KS	At Large Public (cc)	2017
Frank Mercurio	Scott City, KS	Conservation/Environment (cc)	2019
Maurice Miller	Healy, KS	Agriculture Industry	2019
Mike Todd	Scott City, KS	Public Water Supply (cc)	2019
Farrin Watt	Leoti, KS	Agriculture (cc)	2017
Danny Welsh	Wallace Co., KS	Groundwater Management	2019
Scott Noll	Scott City, KS	At Large Public 2	2017

KWA Approves RAC Action Plans

- Nearly 60 action plans developed by RACs in 2016
- 10 of 14 regions have watershed-based goals and action plans



BLUE RIBBON FUNDING TASK FORCE

Vision for the Future of Water Supply in Kansas

Supply

WATER

Conservation

Research

VISION

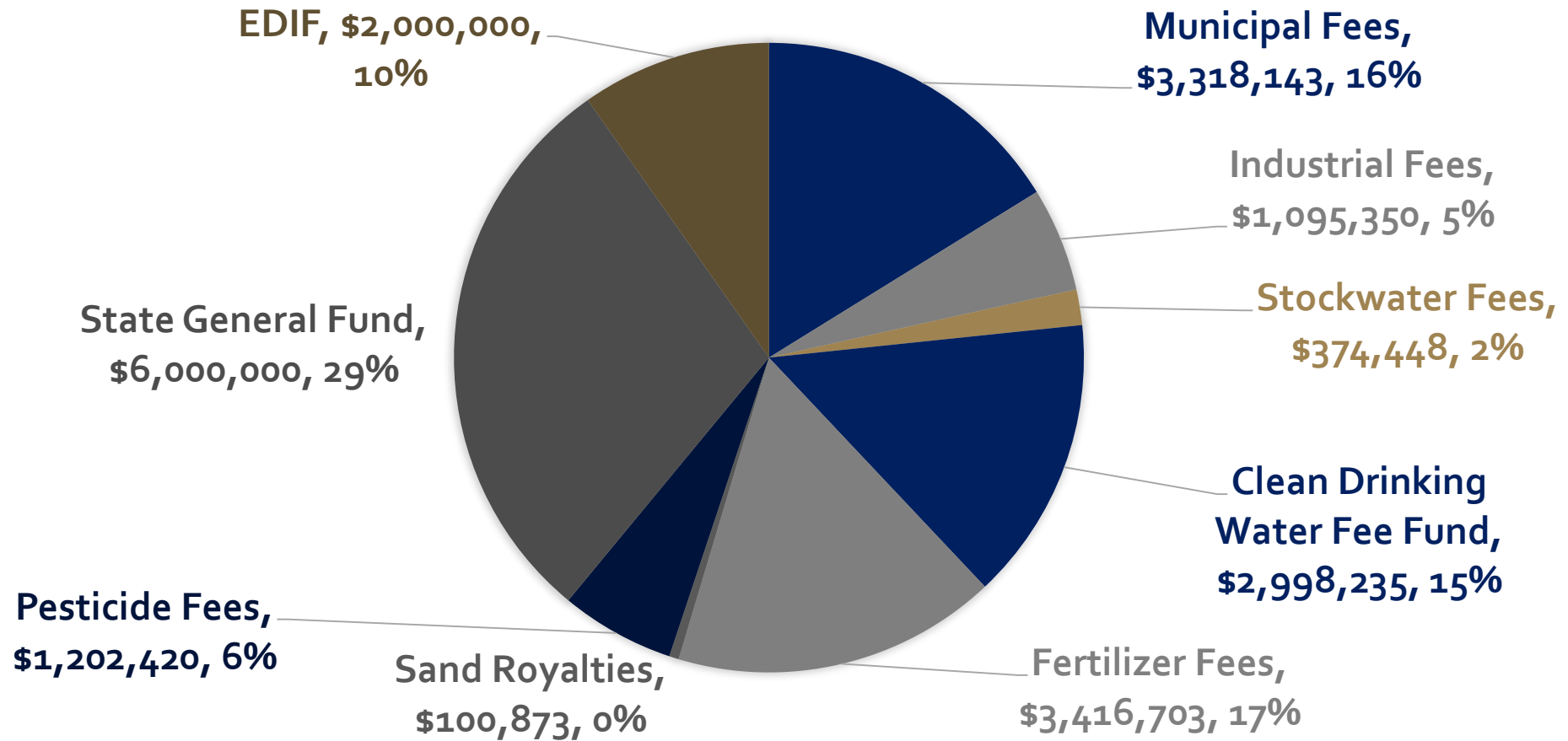
Action

Future

Technology

LOCAL

Review of existing funding and sources



Estimation of annual funding requirement to implement the Vision ~ \$55M

	Water Conservation	Water Management	Technology and Crop Varieties	Additional Sources of Water
Research		\$300,000	\$4,500,000	\$500,000
Education and Outreach	\$4,250,000		\$5,000,000	
Actions and Practices	\$21,900,000	\$100,000	\$1,500,000	\$17,500,000
Administration	Should agency administration be paid from implementation funds?			
Total	\$26,150,000	\$400,000	\$11,000,000	\$19,000,000

* Does not include estimated annual funding needs from Regional Advisory Committee Action Plans

Evaluation of various funding sources

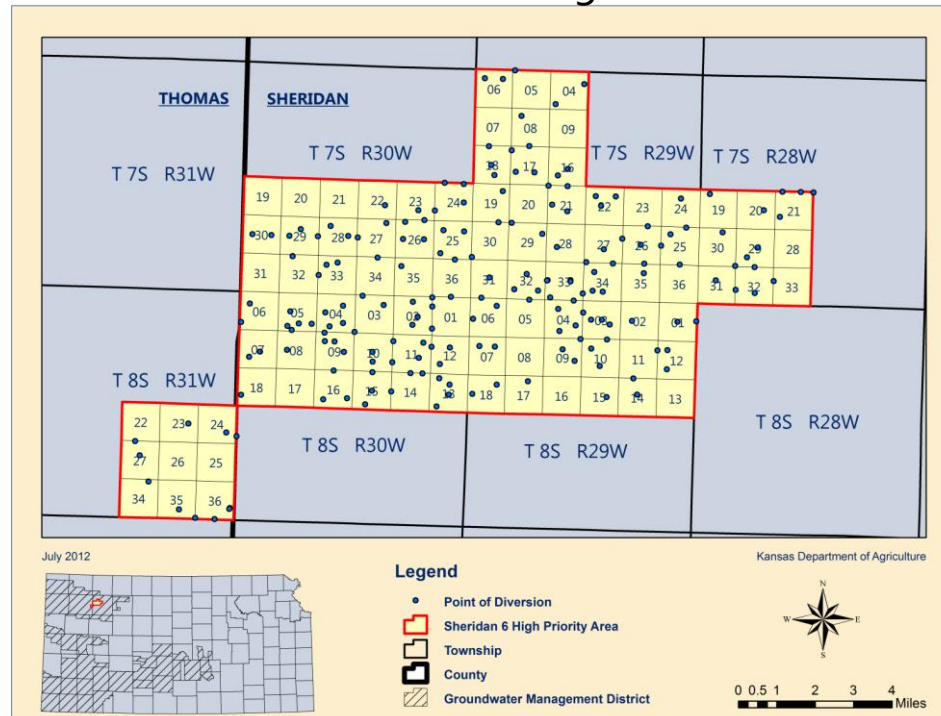
- Increase existing State Water Plan Fund fees
- Water right fee/Irrigation fee
- Bottled drinking water fee
- Residential electric fee
- Statewide retail sales tax

CURRENT IMPLEMENTATION ACTIONS

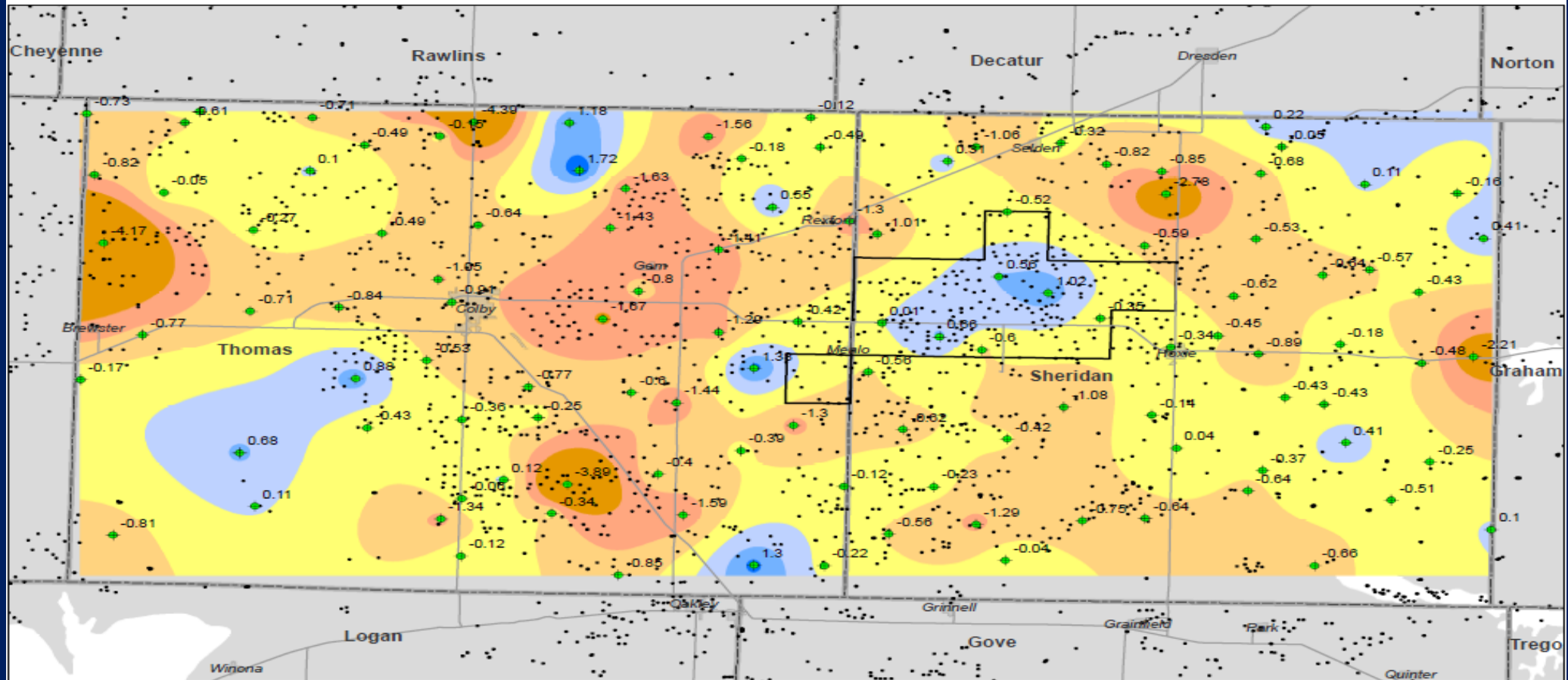
Local Enhanced Management Areas (LEMA)

- Sheridan County – First approved - 55 inches over 5 yrs
- Overall water reduction 20% +
- Producers allowed to move water within boundaries
- Groundwater levels increased inside LEMA in 2015
- Economic results positive so far

- Approved by 2012 Legislature
- Locally-led through groundwater management districts
- Allows for locally identified water use reductions with state enforcement
 - Water use flexibilities allowed
 - Does not permanently alter water right
 - Water allocations packaged into 5 year flex accounts

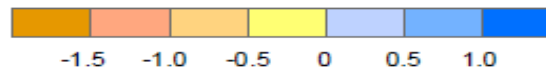


**Interpolated 2015-2016 Water Level Change,
Thomas and Sheridan Counties, Kansas**
Cooperative Water Level Network
Kansas Geological Survey, KDA- Division of Water Resource
Provisional Results, Subject to Change

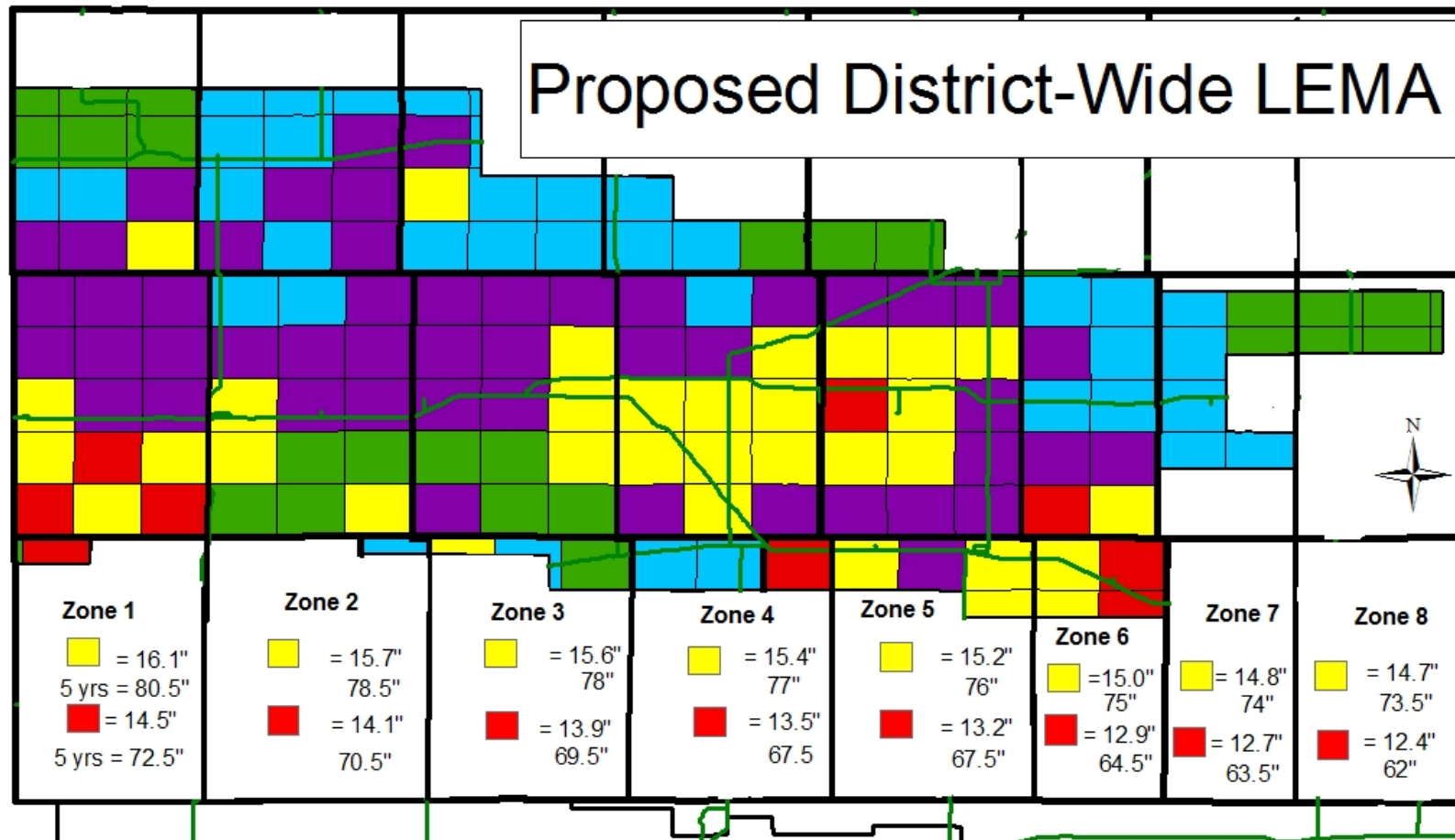


- Water Right Well
- Measured Groundwater Well

Change in Feet



Proposed District-Wide LEMA



- Townships with 2%+ Average Annual Decline in 2004-2015
- Townships with 1-2% Average Annual Decline in 2004-2015
- Townships with 0.5 - 1% Average Annual Decline in 2004-2015 (18 inch max restriction)
- Townships with 0-.5% Average Annual Decline in 2004-2015
- Townships with no decline 2004-2015

PUBLIC MEETINGS:

Nov. 29: Colby City Limits Convention Center; 1:30 pm
 Nov. 30: NW Tech - Union Hall, 1:30 pm MTN
 Dec 1: CN County 4H Building; 1:30 pm
 Dec 5: Hoxie Elks Lodge, 1:30 pm

Prepared by Shannon Kenyon GMD 4

WATER CONSERVATION AREAS

What are Water Conservation Areas (WCAs)

- Signed into law in April 2015 by Governor Sam Brownback
- Provide a tool to water right owners to extend the usable lifetime of the Ogallala-High Plains Aquifer
- Developed by a water right owner or group of water right owners with the consent of the chief engineer to reduce water withdrawals while maintaining economic value via water right flexibility

WATER TECHNOLOGY FARMS

Water Technology Farms



- Three Water Technology Farms established for 2016 growing season.
- KSU providing technical assistance at all three.
- Additional Farms to be added for 2017

FIELD DAY August 2, 2016
10 a.m.

Water Technology Farm — T&O Farms, LLC

South of Garden City on Hwy 83 (15.5 miles) • Turn west on T.V. Rd • Turn south on Stone Rd • Location on east side at large outbuilding (see back)

RSVP to the Kansas Water Office by July 26
1-888-KAN-WATER
kwo-info@kwo.ks.gov

AGENDA
Welcome
Tom Willis
Comments
Governor Brownback
Role of Water Technology Farms
Tracy Streeter
Introduce Partners
Technical Briefings
KSRE, Jonathan Aguilar
Seaman Crop Consulting, Loren Seaman
Dragon-Line, Monty Teeter
Water Conservation Area, KDA-DWR
Tour of Farm
Lunch Provided
by Conestoga Energy Partners

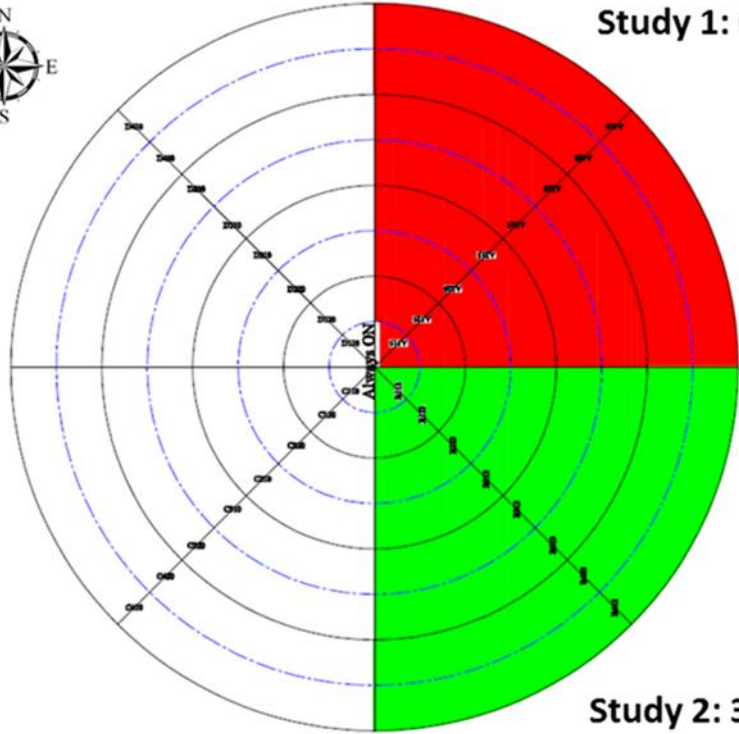
SPONSORS
T&O Farms, LLC (Tom Willis)
Kansas Water Office
Kansas Department of Agriculture
United Sorghum Check-off Program
Kansas Corn Commission
Seaman Crop Consulting
SW Groundwater Management District #3
Conestoga Energy Partners
Teeter Irrigation
Dragon-Line
Helena
Kansas Geological Survey
Ogallala Aquifer Program
Syngenta
Hortau
Servi-Tech Expanded Premium Services
Kansas Farm Bureau
K-State- Mesonet
AquaSpy
CropMetrics
Netafim
Valley Irrigation
Presley Solutions

A public-private project for the conservation of the Ogallala aquifer implemented as part of the Kansas Water Vision

Showcase on a field scale, the latest technologies in irrigation infrastructure, irrigation water management, soil moisture management, conservation tillage, automation telemetry and other agronomic practices aimed at reducing water use.



Study 1: 600 gpm



Study 2: 300 gpm



MDI Evaluation - KSU

- **2015 results comparing MDI to spray nozzles**

- 30% reduction in evaporation
- 14" applied @ 600 gpm - 8" @ 300 gpm
- 247 bu/ac @ 600 gpm – 243 bu/ac @ 300 gpm
- 10% increase in yield with MDI on the 300 gpm well
- Water evenly distributed in soil profile
- Dry soil surface
- Minimal wheel tracks



QUESTIONS & DISCUSSION

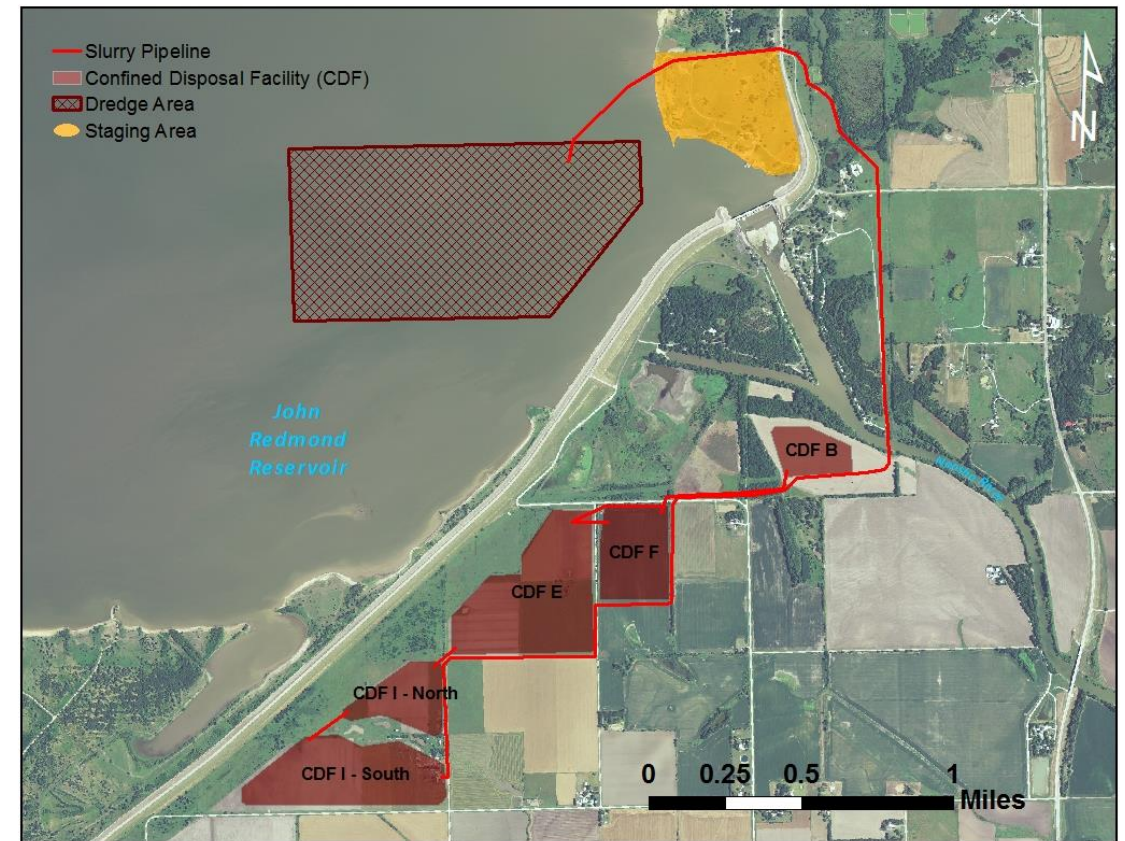
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Kansas Water Office
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Topeka, KS 66612
785-296-3185
tracy.streeter@kwo.ks.gov



RESERVOIR ACTIVITIES

John Redmond Reservoir Dredging

- Backup supply to state's only nuclear power plant
- 1st water supply dredging project at a USACE reservoir in the US
- Phase I completed ahead of schedule



John Redmond Reservoir Dredging



The Dredge

3,000,000 million cubic yards of deposited sediment removed

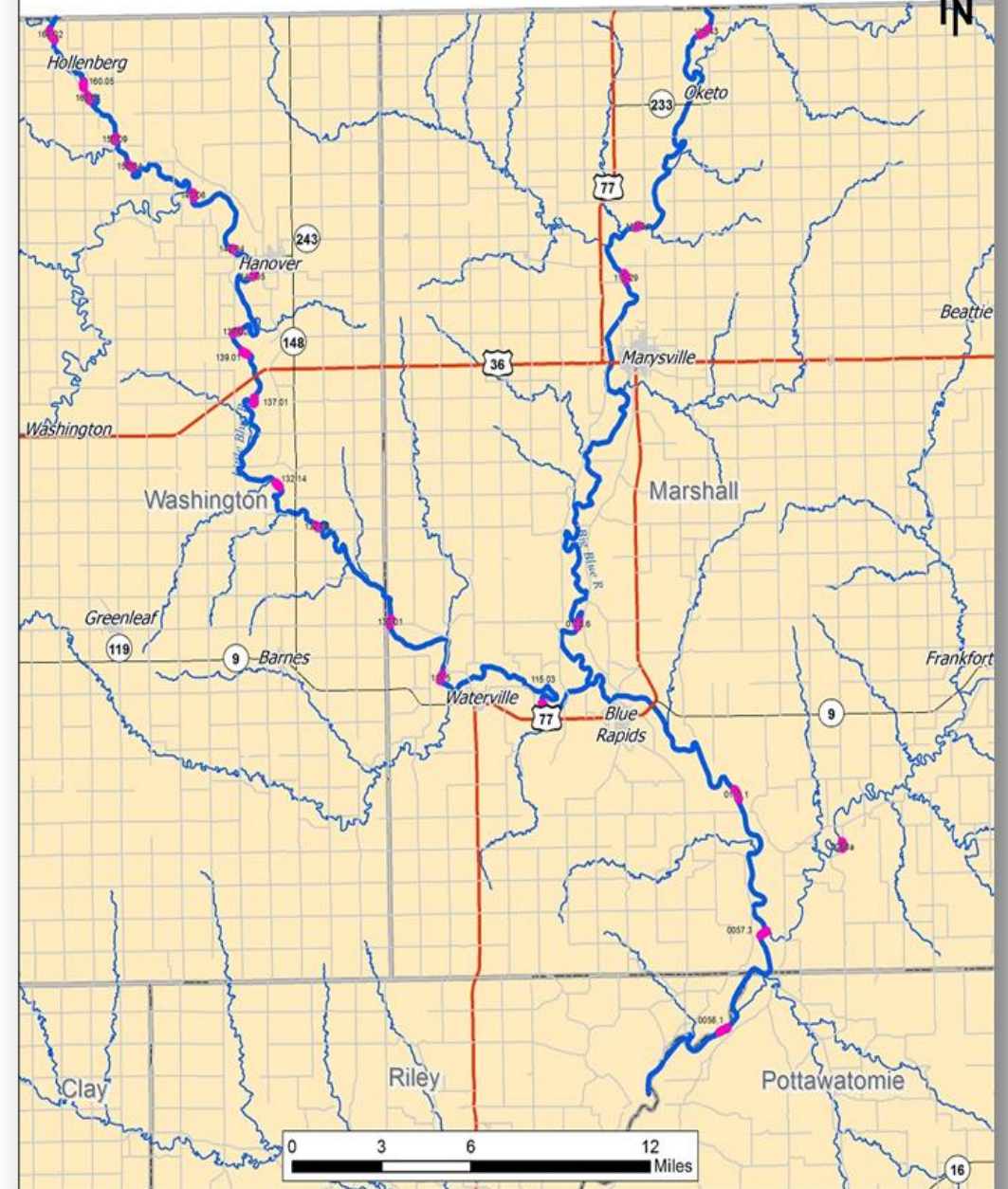


More than 1,800 acre-feet of storage restored

Restore and dispose up to three million cubic yards of sediment from John Redmond Reservoir.

Tuttle Creek Sediment Reduction

- Tuttle Creek WRAPS, KWO, KDHE and KDA-DOC coordinating and pooling funds to complete projects
- \$800,000 allocated for FY16 and FY17
- FY16 funding will be used to pay for the design of several projects above Tuttle Creek
- Construction will occur over the next couple of years

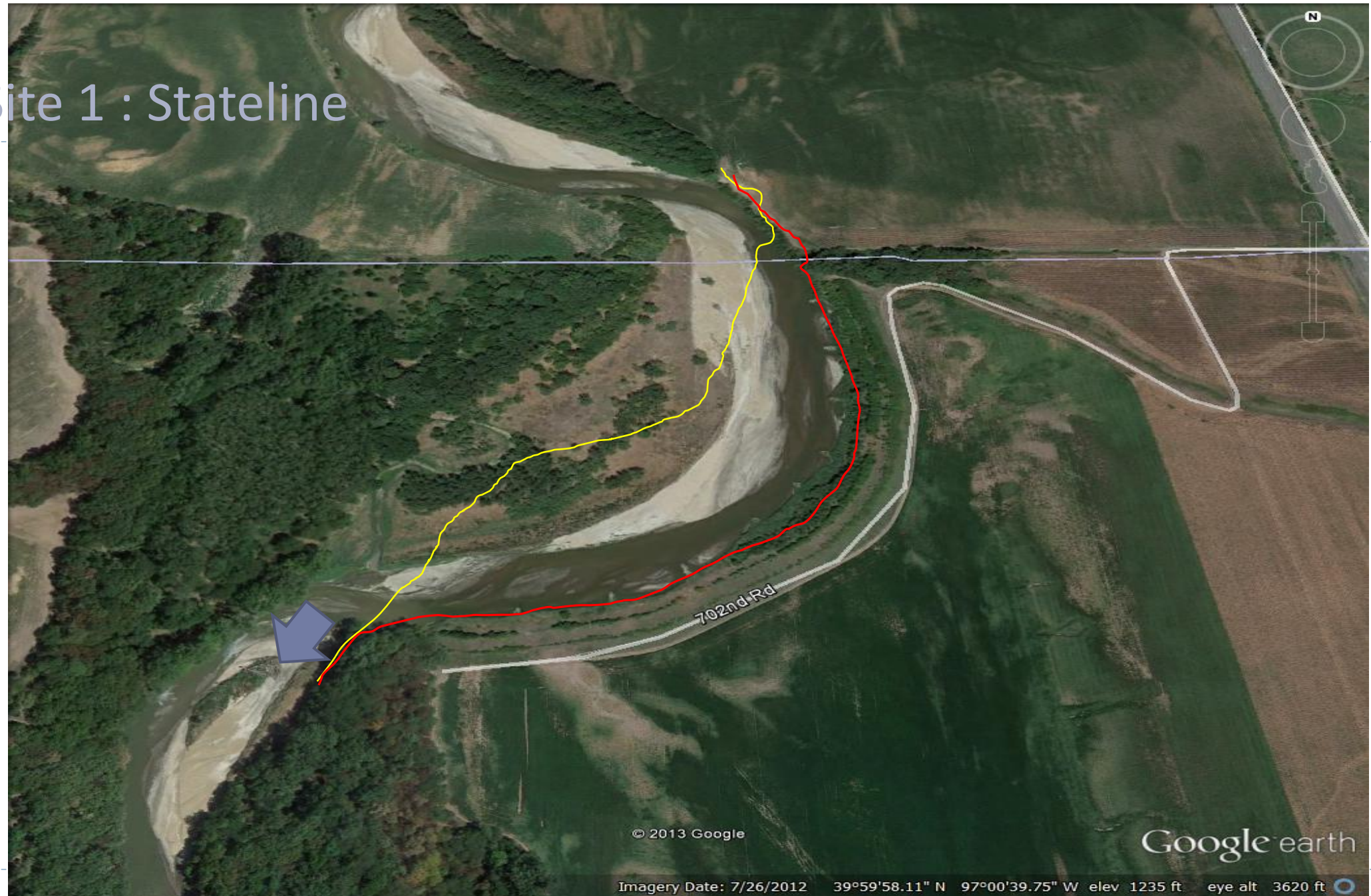


Top Eroding Streambanks: 76 - 100

Before & After



Site 1 : Stateline



Nutrients and Harmful Blue-Green Algae

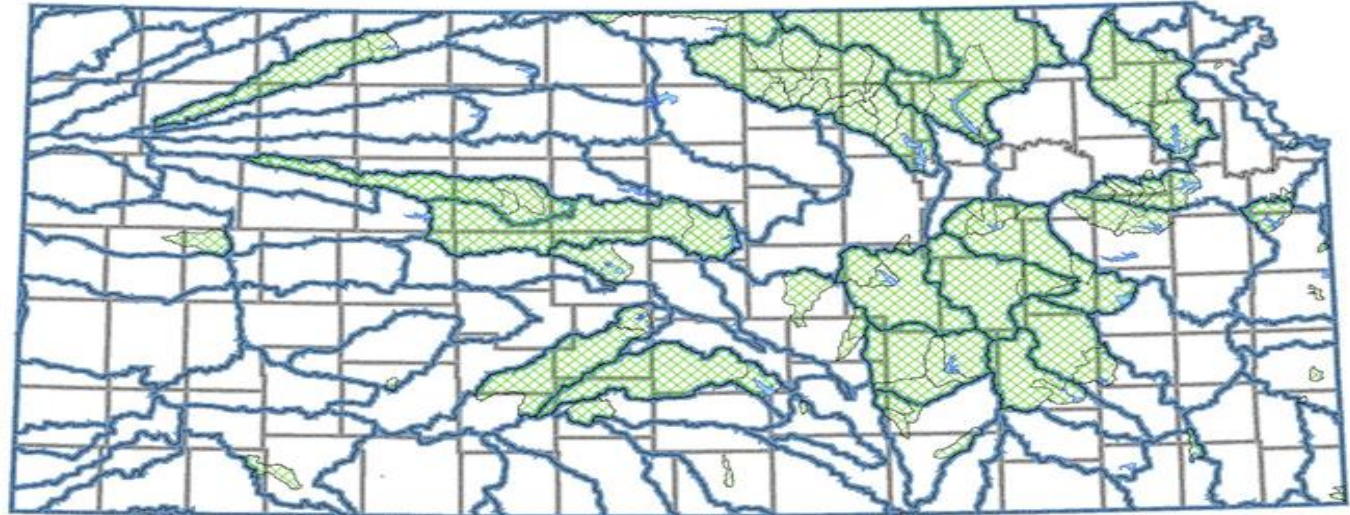
Milford, Marion Reservoirs & others.....



EQIP

- ▶ Ranking criteria for Water Quality funding modified
 - ▶ Maximum points to projects addressing Siltation, Phosphorus and Eutrophication

TMDL Priority Areas
Siltation, Total Phosphorus, and Eutrophication
With KDHE - TMDL Section Built Out Watersheds





QUESTIONS & DISCUSSION

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